WHAT WE DO

- Provide secure wireless military communications and networking technologies

WHO WE ARE

- Department of Defense (DoD) leader in communications/networking research and technology for the Warfighter
- Evaluators of emerging communication technologies

State-of-the-Art Research Opportunities

Contact Info

Communications-Electronics Research, Development and Engineering Center (CERDEC)

Space & Terrestrial Communications Directorate (S&TCD)
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AKO/DKO users: https://wiki.kc.us.army.mil/Portal:STCD
Public: http://www.cerdec.army.mil/STCD

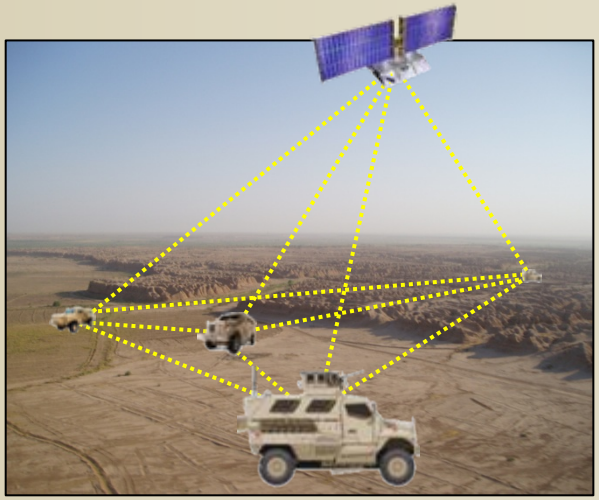
Employee Info

- 370+ civilian employees
  - 290 Engineers and Scientists
  - 60+% Masters and PhD
- Advanced education opportunities
- Competitive salaries with performance-based increases
- Great benefits and flexible schedules
- Many opportunities for career advancement

Army was ranked one of
The Best Places to Work
IN THE FEDERAL GOVERNMENT 2007

Mission Driven
Technology Focused
People Enabled

Leaders in Tomorrow's Communication Technologies



Solutions for Today's Warfighter

Space & Terrestrial Communications Directorate

US ARMY RDECOM
TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

CERDEC
US ARMY – RDECOM

VISION

The DoD leader advancing innovative technologies to ensure networked warfighter dominance.

MISSION

Research, develop and evaluate trusted communications and networking technologies to transition operationally relevant solutions to the warfighter through employment of a dedicated and superior workforce, world class facilities and global partnerships.

STRATEGIC GOALS

- Provide assured **Connectivity** over longer ranges and diverse terrain, while on-the-move
- Boost **Capacity** to meet the increasing demands to the tactical edge
- Ensure cyber **Security** across the enterprise

THRUST AREAS

Wireless Transport

Develop efficient terrestrial, airborne, and satellite communications modulation, coding techniques and sub-component technologies to enable high data-rate transport

- Software Defined Radios (SDRs)
- Advanced SATCOM terminal technology
- Co-site interference mitigation
- Broadband Wireless (3G/4G/802.XX)
- Evolutionary power amplifier technologies

Mobile Networking

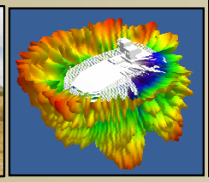
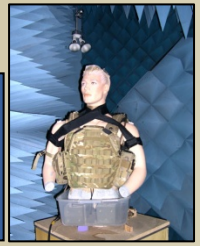
Provide assured mobile networks that work in complex terrains and a variety of geographical areas

- Dynamic, reliable, mobile, cross OSI layer protocols
- Self-organizing/mobile ad hoc networking
- Disruption Tolerant Networks (DTN)
- Small attended/unattended communication devices
- Broadband services to dismounted soldiers
- Satellite communications on-the-move
- Cognitive networks
- Directional RF networking

Antennas

Develop a family of highly efficient, cost effective antennas and subordinate products to sustain robust, high data rate on-the-move communications

- On-the-move and phased array antennas
- Wideband/multiband/multifunction
- Antenna pattern modeling & placement optimization
- Nano technology and metamaterial solutions
- Conformal and low signature
- Increased gain/range

Cyber Security/Information Assurance

Provide continued information superiority and ensure mission critical information is available, connected and secured in an environment of information warfare attacks and unintentional disruptions

- Malicious code detection against zero day attack
- Information sharing across multiple security boundaries
- Intrusion detection
- User authentication
- Cryptography
- Biometrics

Network Operations

Provide automated capabilities that integrate the planning, monitoring, and control activities of network management, information assurance, and information dissemination.

- Payload control and monitoring systems
- Spectrum optimization by balancing policy and technology
- Automated network planning
- Policy-based, mission-centric automation
- Fast simulation/decision aids
- Quality/speed of service
- Satellite network control

System-of-Systems Systems Engineering

Employ a blend of systems engineering, architecture and engineering analysis, modeling & simulation, and experimentation to provide timely, effective, and integrated system architectures.

- Communication effects modeling & simulation
- Live on-the-move field experimentation
- Enterprise transformation
- Decision support systems
- Rapid prototyping
- Support to current DoD operations
- Network bandwidth analysis
- IPV6 migration